for your consideration...

Student Learning Groups

Many teachers have experimented with group work in their classrooms, but not always with complete success. We know that students learn best when they are motivated and fully engaged in the learning process and groups offer a way to achieve those outcomes, but we also know that poorly-run groups can derail the learning process and turn students against group work. Fortunately, there is a sizable literature on the theory and practice of group dynamics, offering research- and practice-based suggestions for getting the most out of student learning groups. We have attempted to summarize the most important considerations in this essay.

Educational researchers have studied student groups for over 25 years, and they have discovered some very compelling reasons to use groups in our classrooms. In courses with well-run groups, students report increased motivation and greater satisfaction with the course. They also seem to learn more of the material and retain it longer than when they are taught via other methods. Finally, research clearly shows that group work promotes higher-order thinking and develops important interpersonal skills. (See, for example, Collier, 1980; Cooper & Associates, 1990; Goodsell & Associates, 1992; Johnson and Johnson, 1989.)

What is a "group?"

One useful way to think about group work is in terms of a continuum, from simple to complex group structures, each of which is suitable for specific tasks (see Table 1). At the lower end of the continuum, little preparation is necessary, yet the results can be very beneficial to student learning. The teacher simply asks students to form groups of two or three to compare their work, develop a consensus, or generate ideas. In this simple structure, students are able to test their ideas "in private" before they have to share it with the rest of the class. Students

will correct each other's misconceptions, contribute prior knowledge to their discussion, and encourage one another to pursue original lines of thought. These simple groupings can be used in very large classes (and even in classrooms with auditorium-style seating), since they don't require elaborate preparation and students can easily put their heads together. Usually, the tasks given to these groups can be accomplished in 5 to 10 minutes.

Slightly larger groups of four to six enable a teacher to assign more in-depth work that requires more (and different) student perspectives. Typically, larger groups are used for more complex challenges such as discussion of difficult reading assignments, solutions to problems, and application of theoretical knowledge. Groups of this size are more difficult to arrange (physically), and because the tasks are more complex they will require more class time than pairs and threes. You should expect each student to have five minutes of "air time" to express individual ideas, thus, a group of four will need at least 20 minutes to complete their task.

"Debriefing" groups with more complex assignments will also take class time, and the teacher needs to decide if it is necessary to debrief every group or if it is possible to poll a sample of the groups to produce the outcome the teacher wants. A general rule of thumb is that as the complexity of the assignment increases so does the amount of time to process the learning activity and debrief the groups to summarize important points.

Teachers form more tightly structured groups to carry out tasks such as performing an experiment, writing a paper, or designing a research project. These tasks may take the group a few days to complete or may last all semester, depending on complexity, and often comprise a large part of the course grade. Complex small-group activities foster collaborative work and

provide the students with real-life experience in negotiating and developing a common product.

Table 1. Group Structures and Associated Tasks

SIMPLE ——————————————→ COMPLEX			
Short-term		Long-term	
Pairs (Dyads) Threes (Triads)	Loosely-Structured Groups (4-6)	Tightly-Structured Groups	Cooperative Learning Groups
• Simple exercises • Exchanging work • Dialogues • "Think, pair, share"	• Short discussions • Reviewing readings • Listing approaches to problems or hypotheses • "Brainstorming"	• Teacher-directed group projects • Group writing • In-depth discussions • Problem-solving	• Independent group projects • Exploratory learning, experimentation

The element that each of these assignments has in common is that they are highly structured and teacher-directed. The teacher must provide detailed instructions on how the group should work together and how it should complete the assigned task. This format is probably the most common type of group work in higher education.

Cooperative learning groups are the most tightly structured in the group continuum, but they are also the most independent of the teacher's control. Cooperative groups operate as self-sustaining and self-regulating "learning teams"—members provide support, encouragement, and advice to each other so that everyone on the team can succeed. Teachers who want to employ cooperative learning in their classes must study the literature to discover how to form and manage the groups—and be willing to yield some of their authority to the groups. Although it is more difficult to learn how to use effective cooperative learning groups, the yields in social cohesion, motivation, and content mastery are enormous. (Contact the Center for Teaching and Learning for resources and support with cooperative learning.)

Preparing Students for Group Work

The "rules" for successful group work are different from the "rules" our students have learned for individual success.

One way to address this problem is to provide some general guidelines for group work and invite each group to add to the list (see Figure 1). This practice helps build member responsibility for the group's conduct. Another approach is to design the group project in a way that allocates specific roles and responsibilities to each member.

A teacher might assign roles to members within the group (or better, provide a description of the roles and allow the students in each group to allocate them). Roles can be static for the duration of the project, or, if appropriate, rotated over the semester. Rotating roles can be an effective strategy for developing students' skills in group work, can encourage shy students, and can curb outspoken or controlling group members.

Figure 1. Guidelines That Promote Effective Group Work

Members of the group should TRY to:

1. be encouraging, friendly, and responsive to other members of the group
2. provide positive, constructive feedback on other members' ideas
3. promote compromise and consensus among group members
4. ensure that everyone has an opportunity to contribute to discussions and the work of the group
5. help set standards for the group and its work
6. help the group monitor its effectiveness as a team
7. be a good listener, attending and responding to other's contributions
8. assume a fair share of the group's work

Members of the group should try NOT to:

1. interfere with the group's work by blocking efforts to achieve consensus
2. divert the group's work by introducing irrelevant or tangential issues
3. show aggression or hostility
4. monopolize the time the group has for its work
5. be passive or act indifferent during the group activity
6. dominate the group or assume a larger share of the work than other group members
7. reintroduce ideas that have already been decided by the group

Types of Group Roles:

- facilitator—provides leadership and direction for the group

- recorder—takes notes and may develop summaries of group work

- timekeeper—monitors time and helps to keep the group on task

- checker—keeps track of the group's progress toward its goals and verifies that every group member understands conclusions, inferences, and hypotheses

- summarizer—restates the group's conclusions/responses and checks for clarity of understanding

- elaborator—connects discussions with prior material

- coordinator—finds and retrieves materials the group needs, e.g., research articles, data, papers, etc.

Although it may seem counter-intuitive, the best groups (those that produce the most original work) are those that have been deliberately formed on the basis of heterogeneity. For long-term projects, teachers should try to create groups with students who have different backgrounds, skills, abilities, and attitudes. Homogeneous groups may work together more smoothly, but they fail to learn important lessons about group dynamics that they will need to work with people of greater diversity productively in the future. Homogeneous groups are also predisposed to "groupthink" (see below). Before forming the groups, a teacher might distribute a survey to identify the kinds of diversity that exist among the students in the course, and discover the variety of talents and skills that will be most beneficial in the group project. Using the survey, a teacher can form groups to maximize the potential for the group's tasks and insure that the diversity of knowledge, skills, and perspectives are distributed equitably.

Stages of Group Development

One of the most useful and influential models for the stages of group development is from Bruce Tuckman's classic study, "Developmental Sequence in Small Groups" (1965). In his original work, he described four stages of group development: "forming, storming, norming, and performing." Later a fifth stage, "adjourning" was added (Tuckman & Jensen, 1977).

Tuckman also made an important distinction between the "task realm" and the "social realm" of group work. Many teachers trying group projects for the first time focus entirely on the group task or product and fail to recognize that long-term task groups must figure out how to work together and interact on a personal level before they can even begin the project. Understanding the process of group development enables teachers to anticipate the kinds of challenges groups will face, allowing them to provide advice and support at each stage in any group project.

In "forming," the first stage, group members get to know each other, explore the assigned task, identify common ground, and begin to develop relationships with one another. Teachers can support this process deliberately by assigning tasks such as the development of a "group résumé," which requires the students to document the talents, skills, and knowledge that group members possess.

The second stage, "storming," focuses on the way the group will organize its tasks, divide responsibility, and work together. This stage can be the most problematic for the group and the teacher if conflicts arise or students fail to value each other's abilities. If a group becomes stalled at this stage, it usually continues the entire semester as a dysfunctional collection of competing interests. The group may blame the teacher for its distress and become convinced that group projects are a terrible idea (and the quality of their finished project will be poor). However, if the teacher provides strategic direction and support, most groups will achieve consensus on structure, process, and outcome. The teacher should encourage group members to practice active listening, to seek areas of compromise, to tolerate differences, and above all exercise patience with each other. Teachers who require groups to spend time on these areas can help them through the "storming" stage.

In the next stage, "norming," team members adjust their behavior to each other as they develop work habits that make teamwork seem more natural and fluid. At the "community building" stage, groups begin to agree on rules of behavior, values, and taboos. Team members begin to trust each other and actively acknowledge each other's contributions to the project; motivation also increases. Feedback is frequent and open, and members share ideas and feelings regularly.

However, if the group's "norming" behaviors are carried too far, productive dissent within the group may decline, as may creativity, in which case "groupthink" may occur. "Groupthink" is the tendency for individuals to conform to what they perceive is the consensus of the group, even though they may not believe it is a good idea. Groups must try to preserve healthy dissent, even in the process of building a cohesive community. "Groupthink" is most common in groups that have a high degree of homogeneity.

Stage four, "performing," is characterized by interdependence, cooperation, high task orientation, high morale, and intense group loyalty. This can be the most satisfying stage of group work in terms of productivity, although not all groups achieve this high level of functioning. However, adequate direction and strategic help by the teacher increases the probability that many will do so.

Teachers often overlook Tuckman's last stage, "adjourning" (dissolution). If groups have achieved a high degree of social cohesion and have had a satisfying and productive experience, they will be reluctant to see the experience end. Teachers can provide formal and/or informal ways to help students cope with this stage, sometimes identified as the "mourning" phase. To some extent, class presentations of the groups' work provide closure and recognition for each group, but end-of-course gatherings, like pizza parties, add a celebratory tone to the end of the group experience.

Implementing Group Work

Although long-term group projects present special challenges, teachers who use any kind of group activity in their courses should pay particular attention to providing structure, directions, and rationale for the work. If students don't know why they are being asked to work in groups or have little idea about the learning objectives for the exercise, their attention, motivation, and productivity will suffer. The teacher should also explain what students can expect to gain from the exercise and how the exercise will "count" toward the final grade.

Many teachers provide only oral instructions for group work, but aside from very short, simple exercises, written directions should always be supplied. For complex or long-term assignments, directions should clearly describe the time commitment, the expected outcomes, instructions for the process, group conduct, and the grading scheme. Giving students a clearly articulated and complete grading rubric that states the method for scoring each component of group work (the presentation or research project and group members' contributions) will help guide their work and may reduce or eliminate competition within the group.

Communication between the teacher and student groups is also of prime importance, especially as the complexity of group assignments increases. A commitment to monitor group activities at each stage enables a teacher to assess progress, to intervene in dysfunctional group behavior, to help solve group problems, and to promote productivity. If the teacher uses a course management system such as BlackBoard, monitoring group activity can be accomplished easily and unobtrusively. Course management systems are particularly useful for posting assignment directions and other supporting documentation (e.g., evaluation rubrics, textural or visual materials). Additionally, the system can allow students to interact on-line, access library resources, and use space to archive their work. Students may need to learn how to use the tools in a course management system—teachers shouldn't assume that they are already familiar with a system or the best features of it for group work.

Evaluating Group Work

Evaluating teamwork requires the teacher to assess the process as well as the product. For students working on the simplest tasks, the evaluation of the process can be as easy as asking them how working this way helped them to learn. Reviewing their qualitative responses can help the teacher gauge the value of this level of group work.

More complex, long-term group work requires additional, more sophisticated evaluation strategies. Students might be required to evaluate their product using a scoring rubric outlining the critical elements required in the assignment. They may also be asked to evaluate each other and the group using a set of process/performance criteria. Engaging the students in the evaluation process also provides a way to adjourn the group (Tuckman's fifth stage). If you would like assistance with developing grading schemes for this level of group work, please call the Center for Teaching and Learning for an appointment.

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